NOTICE INVITING OPEN TENDER

FOR
"UPGRADATION OF EXISTING WEB-GIS BASED DECISION SUPPORT SYSTEM (DSS) APPLICATION FOR FOREST CLEARANCE AND ITS MAINTENANCE FOR THREE YEARS"

FOREST SURVEY OF INDIA
MINISTRY OF ENVIRONMENT, FOREST & CLIMATE CHANGE
GOVERNMENT OF INDIA
KAULAGARH ROAD, P.O.-IPE
DEHRADUN – 248195

Forest Survey of India
Ministry of Environment, Forest & Climate Change
Government of India
Kaulagarh Road, P.O. IPE
Dehradun – 248 195

Contents of Tender Document

SECTION – 1

NOTICE INVITING E-TENDER
(NIT)

Forest Survey of India
Ministry of Environment, Forest & Climate Change
Government of India
Kaulagarh Road, P.O. IPE
Dehradun – 248 195

No: <u>22-308/2018-NFDMC-1652</u>   Dated: 28.05.2019

SECTION–1: NOTICE INVITING E-TENDER (NIT)
(Two Stage Open Tender)

Director General, Forest Survey of India invites online electronic bids (e-tenders) under two covers system on behalf of President of India from domestic bidders registered in India.

"Upgradation of Existing Web-GIS based Decision Support System (DSS) Application for Forest Clearance and its Maintenance for Three Years"

Tender Specification No.: <u>22-308/2018-NFDMC-165</u>2   Dated: 28.05.2019

Tender document can be viewed and downloaded from FSI website <u>www.fsi.nic.in</u> and <u>https://moefcc.euniwizarde.com</u>
The bid for all or any of the equipment's is to be submitted **online only** on <u>https://moefcc.euniwizarde.com</u> up to the last date and time of submission of bids. Sale of hard copy of tender document is not applicable.

The offers, in the prescribed format, shall be submitted online at <u>https://moefcc.euniwizarde.com</u> as per the tender document. No Quotations will be accepted in hard copy, fax, e-mail or any other such means. The intending bidders must be registered with e-tender website <u>https://moefcc.euniwizarde.com</u> . The tender document is also available on Ministry of Environment, Forest and Climate Change website: <u>http://envfor.nic.in/</u> for reference only but not for submission. However, for the purpose of submission, the website<u>https://moefcc.euniwizarde.com</u> should be referred to. NIT can also be seen on CPP Portal <u>https://eprocure.gove.in/epublish/app.</u>

Brief Details & Critical Dates of Tender:

1.1 Brief Details of Tender:

S. No.	Item	Description		
(i)	Name of work	Upgradation of existing Web-GIS based Decision Support System Application (DSS) for Forest Clearance and its Maintenance for Three Years		
(ii)	Tender specification no.			
(iii)	Mode of tendering	e-Tendering system (Open Tender)		
(iv)	Tender ID			
(v)	Cost of bidding document	The interested bidders will have to deposit the amount of 1000/- (non-refundable) towards tender fee through Bharat Kosh (https://bharatkosh.gov.in)		
(vi)	EMD (Bid Security)	The scanned copy of the DD/ Bank Guarantee of Earnest Money Deposit (EMD) Rs. 2,00,000/- (Rupees Two lakh only) in the form of Demand Draft **With Minimum three months Validity** in favour of Assistant Director (Accounts), Forest Survey of India, Kaulagarh Road ,PO-IPE, Dehradun– 248195. **All Micro and Small Enterprises (MSEs) are exempted from EMD and tender fee.**		
(vii)	Completion Period / Schedule	i)	Application Development and Deployment of Web GIS based DSS 3.0 Application for Forest Survey of India (FSI)	Five months from the date of award of contract
		ii)	Application Support/ Stabilization Period	Up to Six months after application deployment
		iii)	Annual Maintenance Contract	Up to three years from the end Of support period
(viii)	Required validity of Bid	Six months from the date from date of receipt of bid.		
(ix)	Tender Inviting Authority	Director General, Forest Survey of India, Kaulagarh Road, P.O. - IPE, Dehradun, Uttarakhand– 248195		
(x)	Tender Processing Fee	Rs. 3000/- + GST (Non Refundable)		

SL. No.	Item	Description
(xi)	Registration Charges	Rs.2360/-(Non Refundable)

1.2 Important Dates of Tender:

S. No.	Particulars	Date & Time
(i)	Publish date and time	28-05-2019 15:00 Hrs.
(ii)	Sale / Document Download Start Date & Time	29-05-2019 09:00 Hrs.
(iii)	Sale / Document Download End Date & Time	26-06-2019 17:30 Hrs.
(iv)	Pre bid conference (**Venue:** Forest Survey of India, Kaulagarh Road, PO-IPE, Dehradun-248195, Uttarakhand)	13-06-2019 15:30 Hrs.
(v)	Online Bid Submission Start Date & Time	14-06-2019 09:00 Hrs.
(vi)	Online Bid Submission Last Date & Time	28-06-2019 17:30 Hrs.
(vii)	Last date of submission of cost of bidding document, EMD and other offline supporting documents to Director General, Forest Survey of India, Kaulagarh Road, P.O-IPE, Dehradun, Uttarakhand- 248195	28-06-2019 17:30 Hrs.
(viii)	Date and time for opening online Technical bid	02-07-2019 15:00 Hrs.
(ix)	Date and time for opening online Financial bid	To be notified after Technical Evaluation

1.3 Technical specifications and details

Given in Part- II

1.4 Eligibility Criteria for Bidders:

S No	Basic Requirement	Specific Requirements	Documents Required
1.	Legal Entity	The Sole Bidder OR Consortium • Maximum three members are allowed in a consortium including Lead Member.	• Copy of Certificate of Incorporation /Registration under Companies Act,1956/2013. • Consortium agreement

		• Lead Member should be registered in India under Companies Act 1956/2013/ LLP Act 2008/Society Act or as amended and should have been in operation for at least 5 years as on date of submission of the bid. • Consortium member either should be registered in India under Companies Act 1956/2013/ LLP Act 2008 (or as amended).	clearly stating the roles and responsibilities of each member
2.	Turnover	The Sole Bidder should have average annual Turnover of 1 Crore for last 3 audited financial years (2016-17, 2017-18 and 2018-19). from GIS/IT projects including but not limited to Base Map Creation/Updating, Surveying, GIS Application Software Development, Implementation and Maintenance.. In case of consortium, the Lead bidder/ other consortium member should have minimum average annual turnover of 1 Crore from GIS/IT projects including but not limited to Base Map Creation/Updating, Surveying, GIS Application Software Development, and Implementation for last 3 audited financial years (2016-17, 2017-18 and 2018-19).	• Audited and Certified Balance Sheet and Profit/Loss Account for the last 3 (Three) Financial Years. • Certificate from the Statutory Auditor/CA on turnover details from the "business areas" over the last 3 (Three) audited financial years (2016-17, 2017-18 and 2018-19).
3.	Net Worth	The Sole Bidder or the Lead Member of consortium should have positive net worth as per the audited consolidated financial statements in each of the last 3 (Three) financial years (2016-17, 2017-18 and 2018-19).	Certificate from the Statutory Auditor on net worth.
4.	Blacklisting	As on date of submission of the proposal, the Sole Bidder or each members of the consortium member, in case of a Consortium, shall not be under a declaration of ineligibility for	Undertaking by the authorized signatory as per the format given as Annexure - V

		corrupt or fraudulent practices with any of the State government/ Central Government / semi government / PSU / Municipal agencies in India at the time of submission.	
5.	Certifications	The Sole Bidder or the Lead Member of consortium should possess below Certifications which are valid till bid validity:	Valid Copy of certificates on the name of the Sole Bidder or Lead Member in case of consortium
6.	Experience	The Sole Bidder or the Lead Member of consortium/ other consortium member should have successfully completed at least one Web GIS based application development/ customization projects with the contract value not less than **50 lakhs** in the last 5 years as on the last date of bid submission. The Cost should not include field survey and data creation activities.	Copy of work order + Completion Certificates from the client

2.1 Bids of those Bidders who have not submitted the requisite Cost of bidding document and EMD (as per Instructions to Bidders (ITB) Clause 3.0 & 4.0) shall not be considered for evaluation, except in case of exemption as per Clause No. 3.2 & Clause No. 4.1 of ITB.

2.2 The bidders must fulfil the following minimum Qualifying Criteria: -

2.2.1

(i) Through this Tender Document, FSI is looking for upgradation of existing web-GIS based DSS Application based on Open Source Software vendors as per the guidelines of the **National Policy on Information Technology, 2012** and **Framework for Adoption of Open Source Software in e-Governance Systems (2014)** as well as Proprietary Software Vendors. The details of the current proprietary software in use of the existing DSS of FSI is given in Part –II Technical Specifications and Details.

(ii) The bidder should have an experience on development/ customization of Web GIS based Geo-spatial applications.(Relevant documents to be submitted.)

(iii) The vendor should be a technology company with a proven record of innovation in application field using Open Source Software or Proprietary software in the field of Remote Sensing &GIS.

(iv) The vendor should have a team of experts working in different domains with capabilities

to develop the application and deliver to FSI

(v) The company should have minimum 05 years' experience in doing similar kind of work for any Central or State Government/Public Sector Organizations.

(vi) The company should have an average annual turnover of Rs. 1 Crore in the last three financial years. (Enclosed the copy of Profit & Loss Account / balance Sheet & ITR).

(vii) The company should also enclose copy of GST Registration

2.2.2 All Start-ups (whether Micro and Small Enterprises (MSEs) or otherwise), falling within the definition as per Gazette notification- G.S.R. 501(E) dt. 23.05.2017 or as amended from time to time are exempted from meeting the qualification criteria in respect of Prior Experience-Prior Turnover in public procurement subject to meeting the quality and technical specification for which necessary documents shall be submitted by such bidders along with the bid.

2.2.3 The reference date for considering the period for eligibility / qualification requirements above shall be the last day of the month previous to the one in which tenders are invited.

3.0 The details/ information regarding online tendering i.e. Registration on https://moefcc.euniwizarde.com portal, Preparation of Bid and Submission of bid are available in the tender document and as well as on CPP Portal under 'Bidders Manual Kit'.

4.0 FSI reserves the right to reject any or all tenders and shall not be bound to assign any reason for such rejection.

Joint Director (FGD)
Forest Survey of India
Phone No.: +91-135-2755037
E-mail: nfdmc@fsi.nic.in

SECTION – II

INSTRUCTIONS TO BIDDERS
(ITB)

SECTION-II:

INSTRUCTIONS TO BIDDERS (ITB)
Upgradation of existing Web-GIS based Decision Support System (DSS) for Application Forest Clearance and its Maintenance for Three Years

1.0 INTRODUCTION

(i)   **Forest Survey of India (FSI)** a premier national level organization under the Ministry of Environment, Forest & Climate Change, Government of India, hereinafter referred to as the 'Purchaser' will receive bids for "**Upgradation of Existing Web-GIS Based Decision Support System Application for Forest Clearance and its Maintenance for Three Years"**. The bid will be received, opened and evaluated online in electronic form through GoI's E-tendering portal i.e. https://moefcc.euniwizarde.com. Link to reach at site is also available at FSI website i.e., www.fsi.nic.in. Bid shall be prepared and submitted in accordance with instructions contained in this Section.

(ii)   The Tenders/Bids are to be submitted as per the **two-stage double envelope tendering process** and all eligibility, technical and financial details should be uploaded as two separate documents.

- Broad Functionalities to be incorporated in DSS Application will be assessed during Technical evaluation of the bids (as mentioned in Appendix I).
- Financial bids of only those firms who qualify the technical evaluation will be considered by the committee.

1.2 This section of the bidding document provides the information necessary for Bidders to prepare online responsive bids, in accordance with the requirements of the Purchaser. It also provides information on online bid submission, opening, evaluation and contract award.

1.3 INSTRUCTION FOR ONLINE BID SUBMISSION:

This tender document has been published on the E-wizard portal https://moefcc.euniwizarde.com/ .The bidders are required to submit soft copies of their bids electronically on the E-wizard Portal, using valid Digital Signature Certificates. The instructions given below are meant to assist the bidders in registering on the E-wizard Portal, prepare their bids in accordance with the requirements and submitting their bids online on the E-wizard Portal. More information useful for submitting online bids on the E-wizard Portal may be downloading from "Download" section available on home page on https://moefcc.euniwizarde.com/ .

1.3.1 REGISTRATION:

(i) The Bidder is requested to visit the link Bidders Manual Kit'at https://moefcc.euniwizarde.com and Central Public Procurement (CPP) Portal (URL: http://eprocure.gov.in/eprocure/app).

(ii) Bidders are required to enroll on the e-Procurement Portal (URL:https://moefcc.euniwizarde.com) with clicking on the link "Online bidder Registration" on the e-tender Portal by paying the Registration fee of Rs. 2360/- per year through online banking.

(iii) As part of the enrolment process, the Bidder will be required to choose a unique username and assign a password for their accounts.

(iv) During enrolment/ registration, the Bidder should **provide the correct/ true information** including valid email-id & mobile no. All the correspondence shall be made directly with the Contractors/ Bidders through email-id provided.

(v) For e-tendering, possession of valid Digital **Signature Certificate** (Class III Certificates with Signing +Encryption key usage) issued by any Certifying Authority recognized by CCA India (e.g. Sify / TCS / nCode / eMudhra etc.), with their profile.

(vi) Upon enrolment on e-procurement portal (URL:https://moefcc.euniwizarde.com) for e-tendering, the Bidder has to register their valid Digital Signature Certificate with their profile.

(vii) Only one valid DSC should be registered by a Bidder. Bidders are responsible to ensure that they do not lend their DSCs to others which may lead to misuse and should ensure safety of the same.

(viii) Bidder can then log into the site through the secured login by entering their user ID/ password and the password of the DSC/ e-Token.

1.3.2 SEARCHING FOR TENDER DOCUMENTS:

There are various search options built in the e-tender Portal, to facilitate bidders to search active tenders by several parameters. These parameters could include Tender ID, Item/work id, Title, Date, etc.

Once the bidders had selected the tenders in which they are interested, bidder can pay the processing fee Rs.3000-/ excluding GST@18%(NOT REFUNDABLE) by net-banking / Debit / Credit card then you may download the required documents / tender schedules, Bid documents etc. Once you pay both fees, tenders will be moved to the respective "Register" Tab. This would enable the e-tender Portal to intimate the bidders through e-mail in case there is any corrigendum issued to the tender document.

Please feel free to contact ITI Helpdesk (as given below) for any query related to e-tendering.

1. Helpdesk landline No: 011-49606060

2. Mr. Amrendra Kumar (90155315108).

1.3.3 PREPARATION OF BIDS:

(i) Bidder shall go through the tender document carefully to understand the documents required to be submitted as part of the bid. Bidders shall note the number of covers in which the bid documents have to be submitted, the number of documents – including the names and content of each of the document that need to be submitted. Any deviations from these may lead to rejection of the bid.

(ii) Any pre-bid clarifications if required, then same may be obtained online through the tender site, or through the contact details given in the tender document.

(iii) Bidders should get ready in advance the bid documents to be submitted as indicated in the tender document/schedule in pdf/xls/rar/zip/ jpg/ dwf formats. If there is more than one document, they can be clubbed together using zip format. Bid documents may be scanned with 100 dpi with black and white option which helps in reducing size of the scanned document.

(iv) To avoid the time and effort required in uploading the same set of standard documents which are required to be submitted as a part of every bid, a provision of uploading such documents (e.g. GST registration copy, annual reports, auditor certificates etc.) has been provided to the bidders. Bidders can use "My Document" available to them to upload such documents. These documents may be directly attached from the "My Document" library while submitting a bid, and need not be uploaded again and again. This will lead to a reduction in the time required for bid submission process.

1.3.4 SUBMISSION OF BIDS:

(i) Bidder should log into the site well in advance for bid submission so that he/ she upload the bid in time i.e. on or before the bid submission time.

(ii) Bidder should prepare the Cost of bidding document/ EMD as per the instructions specified in the tender document. The original Cost of bidding document/ EMD should be posted/ couriered/ given in person to the concerned official, latest by the last date of bid submission or as specified in the NIT/ tender documents. The details of the DD/ any other accepted instrument, physically sent, should tally with the details available in the scanned copy and the data entered during bid submission time. Otherwise the uploaded bid shall be liable for rejection.

(iii) Bidders should select the payment option as "offline" to pay the Cost of bidding document/ EMD and enter details of the DD/BC/BG.

(iv) Bidder should digitally sign and upload the required bid documents one by one in respective "Tender Cover" as indicated in the tender document.

(v) Bidders should note that, the very act of using DSC for downloading the tender document and uploading their offers is deemed to be a confirmation that they have read all sections and pages of the tender document without any exception and have understood the complete tender document and are clear about the requirements of the tender document.

(vi) Bidders are requested to note that each document to be uploaded for the tender should be less than 2 MB. If any document is more than 2 MB, it can be reduced through zip/rar and the same can be uploaded. For the file size of less than 1 MB, the transaction uploading time will be very fast.

(vii) Utmost care shall be taken for uploading 'Schedule of Quantities & Prices' and any change / modification of the price schedule shall render it unfit for bidding.

Bidder shall download the Schedule of Quantities & Prices i.e. BOQ_XXXX.xlxs, in XLXS format and save it without changing the name of the file. Bidder shall fill their respective rates in figures (financial quotes) and other details (such as name of Bidder) in light blue background cells, thereafter save and upload the file online in financial/price bid (Finance) cover without changing the filename. No other cell should be changed.

Bidders are requested to note that they should necessarily submit their financial bids in the 'Finance' cover in the format provided and no other format is acceptable. **If the template of "Schedule of Quantities & Prices" file is found to be modified/ tampered by the Bidder, the bid shall be rejected and further dealt as per provision of clause no. 12.0 of ITB including forfeiture of EMD.**
The Bidders are cautioned that uploading of financial bid elsewhere i.e. other than in financial cover shall result in rejection of the tender.

(ix) Bidder should submit their bids through online e-tendering system to the Tender Inviting Authority (TIA) well before the bid submission end date & time (as per Server System Clock). The TIA will not be held responsible for any sort of delay or the difficulties faced during the submission of bids online by the Bidder at the eleventh hour.

(x) After the bid submission (i.e. after clicking —Freeze Bid SubmissionII in the portal), the Bidder should take print out of system generated acknowledgement number, and keep it as a record of evidence for online submission of bid, which will also act as an entry pass to participate in the bid opening.

(xi) Bidder should follow the server time being displayed on Bidder's dashboard at the top of the tender site, which shall be considered valid for all actions of requesting, bid submission, bid

opening etc., in the e-tender system.

(ⅻ) All the documents being submitted by the Bidder would be encrypted using PKI (Public Key Infrastructure) encryption techniques to ensure the secrecy of the data. The data entered cannot be viewed by unauthorized persons until the time of bid opening. The confidentiality of the bids is maintained using the secured Socket Layer 128 bit encryption technology. Data storage encryption of sensitive fields is done. Any bid document that is uploaded to the server is subjected to symmetric encryption using a system generated symmetric key. Further this key is subjected to asymmetric encryption using buyers / bid openers public keys. Overall, the uploaded tender documents become readable only after the tender opening by the authorized bid openers.

1.3.5 ASSISTANCE TO BIDDERS:

1) Any queries relating to the tender document and the terms and conditions contained therein should be addressed to inviting authority of the tender.

2) Any queries relating to the process of online bid submission or queries relating to e-tendering Portal in general may be directed to the e-Wizard Helpdesk. The contact number for the helpdesk is **Mr. Amrendra Kumar: 09015535108, Email:ewizardhelpdesk@gmail.com, Ph: 011-49606060.**

Toll Free Number 1800-3070-2232. Mobile No. +91-7878007972 and +91-7878007973.

2.0 Eligibility Criteria for Bidders:

2.1 Bids of those Bidders who have not submitted the requisite Cost of bidding document and EMD (as per Instructions to Bidders (ITB) Clause 3.0 & 4.0) shall not be considered for evaluation, except in case of exemption as per Clause No. 3.2 & Clause No. 4.1 of ITB.

2.2 The bidders must fulfill the following minimum Qualifying Criteria: -

2.2.1

(i) The vendor should have a team of experts working in different domains pertaining to GIS Application Development with capabilities to develop the application and deliver to FSI.

(ii) The company should have minimum 05 years' experience in doing similar kind of work for any Central or State Government/Public Sector Organizations.

(iii) The company should have an average annual turnover of Rs 1 Crore in the last three financial years. (Enclose the copy of Profit & Loss Account / balance Sheet & ITR).

(iv) The company should also enclose copy of GST Registration

(ii) In case a bidder is participating in a tender on behalf of one vendor, he is not allowed to

participate/ quote on behalf of another vendor in this tender or in a parallel tender for the same item. All such bids with same make/ manufacture will be rejected

(iii) Bidder must produce with their Bid – PAN and Goods & Services Tax Identification No. (GSTIN).

(iv) The individual(s) signing the Bid or other documents in connection with the Bid must attach the Power of Attorney in his/their name as a part of Pre-Qualification Bid. In case of non-submission of valid Power of Attorney, the Bid is liable to be rejected.

2.2.2 The reference date for considering the period for eligibility / qualification requirements above shall be the last day of the month before the one in which tenders are invited.

2.3 Bids of only those Bidders who are meeting the Eligibility Criteria specified above will be considered for evaluation and award of the contract. Bidders will submit duly notarized requisite supporting documents [as per clause 2.2.2 & clause 2.2.3 of NIT] and testimonials with their Bids to prove their credentials and claim of meeting the Eligibility Criteria.

Note: Mere downloading of Bid document by prospective Bidder shall not be construed that such a bidder automatically fulfills the prescribed eligibility criteria. Whether the bidder meets the specific eligibility criteria or not, shall be checked or ascertained, on opening their bids by scrutinizing documentary evidences furnished by them along with their bid.

3.0 Cost of bidding document:

3.1 Complete bid document can be viewed and downloaded from FSI website www.fsi.nic.in or https://moefcc.euniwizarde.com and Central Public Procurement (CPP) Portal https://eprocure.gov.in/eprocure/app. The interested bidders will have to deposit the amount of Rs. 1000/- (non-refundable) towards tender fee through **Bharatkosh** (https://bharatkosh.gov.in). The bidder shall fill the Cost of bidding document details online and submit DD to Tender Inviting Authority i.e. Director General, Forest Survey of India, Kaulagarh Rod, P.O IPE, Dehradun-248195 Phone No.: +91-135-2754507, E-mail: dgfsi@fsi.nic.in on or before the date as specified in NIT.

3.2 The Bidder shall bear all costs associated with the preparation and submission of his bid, and the Purchaser will in no case be responsible or liable for these costs, regardless of the conduct or outcome of the bidding process.

4.0 Bid Security / Earnest Money Deposit (EMD)

4.1 Bidder shall submit along with the bids, the requisite Bid Security / EMD for an amount of ₹2,00,000/-(Rupees two lakh only) as given in NIT appended hereto. Bid security / EMD may be deposited in the form of Crossed Demand Draft/ Bank Guarantee in favour of 'Assistant director (Accounts)' FSI Kaulagarh Road, PO-IPE, Dehradun. Failure to do so may prevent a tender from being considered.

Micro and Small enterprises (MSEs) Units registered with NSIC under their Single Point Registration Scheme having Udyog Aadhar Memorandum for the goods / services are exempted from furnishing the Bid Security / EMD.

They should furnish with the Bid a Notarized copy of the valid registration certificate / Entrepreneurs memorandum (EM-II) details / other relevant documents issued by above board / body in their favours, for the goods / services covered under this Tender document. No other bidders are exempted from furnishing Bid Security / EMD as mentioned above.

Start-ups as recognized by Department of Industrial Policy & Promotion (DIPP) are exempted from furnishing the bid Security/ EMD. They should furnish with the Bid a Notarized copy of the valid certificate of recognition issued by DIPP. No other bidders are exempted from furnishing Bid Security / EMD except as mentioned elsewhere in the document.

4.2 The bidders shall not be entitled, during the period of validity of their offers without the consent in writing of the Purchaser, to revoke or withdraw their bids or vary in any respect their offer or any terms and conditions thereof. In case of a bidder revoking or withdrawing his Bid or varying any terms and conditions in regard thereto, without the consent of the Purchaser in writing during the period of validity of his offer, the Purchaser shall forfeit the Bid Security / EMD furnished by the bidder along with his offer.

In addition to this the bidder may at the discretion of the Purchaser, be debarred from bidding for a period as may be considered fit by the Purchaser, against any Bid that might be invited by the Purchaser in future. The Purchaser will also be within its rights to circulate the information, at its discretion to other prospective purchasers about the bidder having withdrawn his offer within the validity period.

4.3 Bids received unaccompanied by either an acceptable Bid Security / EMD or a notarized photocopy of valid certificate of registration stated as above shall be rejected as being non-responsive.

4.4 Bid Security / EMD of the successful bidder will be returned when the bidder has furnished requisite Performance Guarantee as stipulated in Terms and Conditions of Contract (T&C). Bid

Security / EMD of bidders who are not qualified for opening of price bid shall be returned within 15 days after such notification. The Bid security / EMD of all the unsuccessful bidders whose price bid has been opened will be returned within 15 days of notification of the award of Contract to the successful bidder. The Earnest Money of unsuccessful bidders shall be remitted by the Employer in the account mentioned in ECS Form (Annexure-IV) through ECS mode.

4.5 The Bid Security / EMD shall be forfeited:

a) If the Bidder withdraws its bid or varies any terms & conditions, without the consent of the Purchaser, in regard thereto during the period of Bid validity specified by the bidder; or

b) If the bidder indulges in Corrupt, Fraudulent, Collusive or Coercive practice(s) as mentioned in the clause 12.0 of ITB; or

c) If the bidder does not accept the correction of its Bid Price pursuant to ITB Sub-Clause 10.7; or

d) If the successful bidder having been notified of the acceptance of its Bid by the Purchaser during the period of Bid validity refuses to accept / execute the Order or fails to enter into Contract Agreement when required; or

e) In the case of a successful Bidder, if the Bidder fails within the specified time limit to furnish the required Performance Security in accordance with T&C.

5.0 The bidder shall prepare the bid and submit the bid online only on —**Electronic Tendering System"** in following manner:

5.1 ONLINE SUBMISSION:

A Pre-bid conference will be held at Dehradun on 13.06.2019 3:30 pm onwards wherein the technical specifications of the goods and services required by the purchaser will be discussed to have clarity on the matter. Bidders are free to attend the conference.

5.1.1 Cover-1: Technical Bid:

Online bids should be submitted containing scanned copy of following document in Cover-1:

i) All Documents establishing conformity to the Eligibility Criteria as mentioned at Clause 2.0 of ITB.

ii) Demand Draft/Banker's Cheque/Notarized copy of valid relevant MSEs Certificate towards Cost of bidding document.

iii) Demand Draft/Banker's Cheque/Bank Guarantee/Notarized copy of valid relevant MSEs Certificate towards Bid Security / EMD.

iv) Annexure – I: Bid Performa & Annexure – III (Self Declaration by the Bidder)

v) Annexure – II: Electronic Clearance System (ECS) Form.

vi) Copy of PAN and GSTIN

vii) Scanned copy of Power of Attorney along with authority of executants.

viii) Annexure – III: Declaration regarding applicability of Micro, Small & Medium Enterprise under MSMED Act, 2006 along with notarized copy of the certificate.

ix) Annexure – IV: Declaration regarding applicability of Start-Ups under Start-Up India Initiative along with notarized copy of certificate.

5.1.2 Cover-2: FINANCIAL BID (PRICE-BID)

The Financial Bid (Price Bid) shall be submitted in electronic form in conformity with the tender specifications on the portal only by the time & date as specified in NIT.

Submission of the Financial Bid (Price Bid) by any other means shall not be accepted by the Purchaser in any circumstances.

Online submission of the bid will not be permitted on the portal after expiry of submission time and the Bidder shall not be permitted to submit the same by any other mode.

5.2 OFFLINE SUBMISSIONS:

Hard copy / Supporting documents:

The scanned copy(ies) of all the offline documents (hard copies) are to be uploaded online on the portal along with the Bid as provided in ITB clause 5.1.

i) DD / Banker's Cheque / Notarized copy of valid relevant MSEs Certificate towards cost of bidding document.

ii) DD / Banker's Cheque / Notarized copy of valid relevant MSEs Certificate towards Bid Security / EMD.

iii) Power of Attorney along with authority of the executants.

Hard copy of online documents, if desired by the Purchaser, shall be submitted by the bidder in due course of time.

These envelope(s) shall not contain anything else. This part of bid should not contain any **"Price information".**

If any discrepancy is found between the Hard Copies of the offline documents viz. DD towards Cost of bid document & DD towards Bid Security / EMD, Power of Attorney and scanned copy of same uploaded online then the online bid shall be liable for rejection.

5.3 The online bid (Techno-commercial Bid and Price Bid) shall be submitted up to the due date &time indicated in the NIT or any extension thereof. Offline documents (as specified at Clause No. 5.2 above) in Physical Form shall be received by the Purchaser at the address specified in Invitation for Bids (Notice Inviting e-Tender) not later than the time and date stated in the Invitation for Bids or any extension thereof. In the event of the specified date for submission of Offline documents being declared a holiday for the Purchaser, the same will be received up to the appointed time on next working day. However, the date and time for online submission of the Bids shall continue to be the date and time specified or amended, if any.

5.4 The Purchaser reserves the right to itself to postpone and/or extend the date of receipt or to withdraw the Bid notice, without assigning any reason thereof, entirely at its discretion. In such an event, bidders shall not be entitled to any compensation, in any form whatsoever.

6.0 Bid Proforma:

The bidder should fill in the Bid Proforma appended as Annexure-I herewith and submit the same online

7.0 ECS Form:

Bidders are required to submit duly filled in ECS Form appended as **Annexure-II** herewith and submit the same online.

8.0 Bidders can submit their bids for all or any of the equipment listed in 15.0 of Section-II.

9.0 Online opening of Bids by Purchaser:

9.1 The Purchaser will open the Bids online on the date as specified in NIT or any extension

thereof. In the event of the specified date or amendment if any for the opening of bids/offline documents being declared a holiday for the Purchaser, the opening shall be carried out at the specified time on the next working day.

9.2 Initially, the 'Technical Bid 'shall be opened and the 'Price Bid 'of only those bidders whose Techno-Commercial bid is acceptable to the Purchaser shall be opened online subsequently. The decision of the Purchaser is final and binding in this regard.

10.0 Evaluation of Bids:

10.1 Part bids i will not be considered for evaluation. Complete bid for development of all the three components of the Upgradation will only be considered. The Purchaser will examine the bids to determine whether they are complete, whether any computational errors have been made, whether the documents have been properly signed and whether the bids are generally in order and conforms to all the terms, conditions and specifications of the bid documents without any deviations.

The Purchaser will, thereafter check and ascertain whether the bidder fulfils the Eligibility criteria and other requirements specified under ITB Clause 2.0. The Bids submitted by the Bidders who meet the Eligibility Criteria set under ITB Clause 2.0 shall only qualify for consideration and further technical evaluation by the Purchaser.

The Purchaser's determination of a Bid's responsiveness is to be based on the contents of the Bid itself without recourse to extrinsic evidence. If a Bid is not substantially responsive, it will be rejected by the Purchaser and may not subsequently be made responsive by the Bidder by correction of the nonconformity.

10.2 Prior to the detailed evaluation, the Purchaser will determine whether each bid is of acceptable quality, is generally complete and is substantially responsive to the bidding documents. For purposes of this determination, a substantially responsive bid is one that conforms to all the terms, conditions and specifications of the bidding documents without material deviations, objections, conditionality or reservations.

A material deviation, objection, conditionality or reservation is one:

(i) that affects in any substantial way the scope, quality or performance of the Contract;

(ii) that limits in any substantial way, inconsistent with the Bidding Documents, the Purchaser 's rights or the successful Bidder 's obligations under the Contract; or

(iii) whose rectification would unfairly affect the competitive position of other Bidders who are presenting substantially responsive Bids.

The Purchaser may waive any minor informality, non-conformity or irregularity in a Bid that does not constitute a material deviation, and that does not prejudice or affect the relative ranking of any Bidder as a result of the technical and commercial evaluation, as per clause 10.1 of ITB.

Also, if any discrepancy is found between the Hard Copies of the offline documents viz. DD towards cost of bid document & DD towards Bid Security / EMD, Power of Attorney, and scanned copy of same uploaded online, then the online bid may be liable for rejection.

10.2.1: Scoring for Technical Evaluation:

The Technical evaluation committee appointed by DG, FSI will carry out its evaluation applying the evaluation criteria and point system. Each responsive proposal will be attributed a technical score (St.). The technical proposal should score at least **70 points out of 100** to be considered for financial evaluation.

{Refer Section-II point 15.0}

10.3 During bid evaluation, the Purchaser may ask the bidder for clarification of its bid. The request for clarification and the response shall be in writing, and no change in the price or substance of the bid shall be sought, offered or permitted.

10.4 The bidder shall quote for the individual items mentioned in the Price Bid. The evaluation of the bids shall be done based on the total price as per BOQ_XXXX: Schedule of Quantities & Prices of Section-III

10.5 All applicable taxes, duties and levies as mentioned in BOQ_XXXX i.e. Schedule of Quantities & Prices of Section-III shall be considered for the purpose of evaluation of bids.

10.6 Any adjustments in price that result from the above procedures shall be added, for purposes of comparative evaluation only, to arrive at an 'Evaluated Bid Price '. Bid prices quoted by Bidder shall remain unaltered.

10.7 Scoring for Financial Evaluation:

The evaluation committee will determine if the financial proposals are complete and without computational errors. The lowest financial proposals (Fm) will be given a financial score (Sf) of 100 points. The financial scores of other proposals will be computed as follows $Sf = 100 \times Fm/F$ (Where F is amount of financial proposal).

10.8 Ranking of Bids:

Bids will finally be ranked according to their combined technical (St) and financial (Sf) scores using the formula $S = St \times T\% + Sf \times F\%$. The weight (T %) given to the Technical Proposal is 70%. The weight (F %) given to the Financial Proposal is 30%.

10.9 Technical and Financial evaluation will be done in a composite manner taking into consideration proposal in the bids for all the three components of the procurement.

11.0 Award Criteria & Purchaser's Right to accept any bid and to reject any or all Bids

11.1 The Purchaser reserves the right to accept or reject any bid, or cancel/ withdraw invitation to Bid for any reason including National Defence and security conditions, and annul the Bidding process and reject all bids at any time prior to the award of Contract, without thereby incurring any liability to the affected Bidder or Bidders. However, the Bidder(s), who wish to seek reasons for such decision of cancellation/ Purchaser shall inform rejection, of the same unless its disclosure reasonably could be expected to affect the sovereignty and integrity of India, the security, and strategic, scientific or economic interest of the State, relation with foreign state or lead to incitement of an offence.

11.2 The Purchaser shall not be bound to accept the lowest or any bid and reserves to itself the right of accepting whole or a portion of any of the bid as it may deem fit, without assigning any reason thereof.

11.3 Canvassing in any form or any approach, official or otherwise, by the Bidder to influence the consideration of his bid shall render the bid liable to summarily rejection.

11.4 Subject to ITB Clause 11.1 and 11.2, the Purchaser shall award the contract to the successful Bidder whose bid has been determined to be substantially responsive and to be the highest ranked bid, further provided that the Bidder is determined to be qualified to perform the contract.

11.5 The scoring arrived at in terms of clause 10.0 shall be considered for the comparison and evaluation of the bids. However, for the purpose of award of work, the combined ranking as per clause 10.0 of ITB shall be considered.

12.0 Corrupt, Fraudulent, Collusive or Coercive Practices
It is expected from the Bidders/ Vendors/ Contractors that they will observe the highest standard of ethics during the procurement and execution of such contracts. In pursuance of this policy:

(a) For the purpose of this provision, the terms set forth below shall mean as under:

(i) "**corrupt practice**" means the offering, giving, receiving or soliciting, directly or indirectly, of anything of value to influence the action of a public official in the procurement process or in contract execution; and

(ii) **"Fraudulent practice"** means a misrepresentation/ omission of facts in order to influence a procurement process or the execution of a contract.

(iii) "**Collusive practice**" means a scheme or arrangement between two or more Bidders, with or without the knowledge of the Purchaser, designed to establish bid prices at artificial, non-competitive levels; and

(iv) "**Coercive practice**" means harming or threatening to harm, directly or indirectly, person or their property to influence their participation in a procurement process or affect the execution of a contract;

(b) A Bid may be rejected by the Purchaser if it is determined at any stage that the respective Bidder has engaged in corrupt, fraudulent, collusive and coercive practices as mentioned above in competing for the contract in question.

(c) The Purchaser may declare a bidder ineligible, either indefinitely or for a stated period of time, if it at any time determines that the firm has engaged in corrupt or fraudulent practices, Collusive and Coercive practices in competing for, or in executing, a contract.

(d) **Banning of Business Dealings:** It is not in the interest of FSI to deal with Agencies who commit deception, fraud or other misconduct in the tendering process and/or during execution of work undertaken. The grounds on which Banning of Business Dealings can be initiated are as follows:

(i) If the security consideration, including questions of loyalty of the Agency to FSI so warrants;

(ii) If the director/owner of the Agency, proprietor or partner of the firm, is convicted by a court of law for offences involving moral turpitude in relation to its business dealings with the Government or any other public sector enterprises, during last five years;

(iii) If the Agency has resorted to Corrupt, Fraudulent, Collusive, Coercive practices including misrepresentation of facts and violation of the any provisions provided in the Contract;

(iv) If the Agency uses intimidation / threatening or brings undue outside pressure on FSI or its official for acceptance / performances of the job under the contract;

(v) If the Agency misuses the premises or facilities of the FSI, forcefully occupies or damages the FSI 's properties including land, water resources, forests / trees or tampers with documents/records etc.;

(vi) If the Agency does not fulfill the obligations as required under the Contract and Violates terms & conditions of the contract which has serious affect for continuation of the Contract.

(vii) If the work awarded to the agency has been terminated by FSI due to poor performance of the contract in the preceding 5 years.

(viii) If the Central Vigilance Commission, Central Bureau of Investigation or any other Central Government investigation Agency recommends such a course in respect of a case under investigation or improper conduct on agency 's part in matters relating to the FSI or even otherwise;

(ix) On any other ground upon which business dealings with the Agency is not in the public interest.

(x) If business dealings with the Agency have been banned by the Ministry of Environment, Forest& Climate Change, Government of India OR any PSU/ any other authority under the MOEF&CC if intimated to FSI or available on MOEF&CC Website, the business dealing with such agencies shall be banned with immediate effect for future business dealing without any further investigation.

(Note: The examples given above are only illustrative and not exhaustive. The Competent Authority may decide to ban business dealing for any good and sufficient reason).

13.0 Check List (This Check List duly tick marked shall be submitted online)

S. No.	Document Required	Action required	Submitted Please tick (✓)
1.	Notarized copies of Documentary evidences in Support of the qualification criteria as per ITB Clause No. 2.0.	To be uploaded online.	
2.	**Cost of bidding document**	To be submitted in hard copy and uploaded online.	
	(i) DD amounting to ₹_____/-		(i)
	Or		**Or**
	(ii) Notarized copy of valid Certificate towards exemption of Cost of bidding document.		(ii)
3.	**Bid Security / EMD**	To be submitted in hard copy and uploaded	

S. No.	Document Required	Action required	Submitted Please tick (✓)
		online.	
	(i) DD Amounting to ₹_____/-		(i)
	Or		**Or**
	(ii) Notarized copy of certificate towards exemption of Bid Security / EMD.		(ii)
4.	Power of Attorney along with authority of executants.	To be submitted in hard copy and uploaded online.	
5.	ECS Form	To be uploaded online duly filled in.	
6.	PAN - Copy of PAN card	To be uploaded online	
7.	GST - Copy of GST certificate	To be uploaded online	
8.	MSMED declaration as per Performa.	To be uploaded online duly filled in	
9.	Bid Proforma	To be uploaded online duly filled in	
10.	Schedule of Quantities & Prices i.e. Financial Bid (Price Bid) of Section-III	To be filled online	
11.	Copy of Authorized Dealer Certificate from OEM	To be uploaded online duly filled in	

Four Key Instructions for Bidders:

Note: The following **Four Key Instructions for Bidders** must be assiduously adhered to:

i) Obtain individual Digital Signature Certificate (DSC or DC) well in advance of tender submission deadline.

ii) Register your Organization on https://moefcc.euniwizard.com portal well in advance of tender submission deadline.

iii) Get your Organization's concerned executives trained on https://moefcc.euniwizard.com portal well in advance of tender submission deadline.

iv) Submit your bids well in advance of tender submission deadline on portal (There could

be last minute problems due to internet timeout, breakdown, etc.) While the first three instructions mentioned above are especially relevant to first-time users of portal, the fourth instruction is relevant at all times.

Note: Electronic procurement system will not allow any Bidder to place their bids after the expiry of scheduled date & time. FSI/ NIC-CPPP shall not be responsible for any delays/ problems related to bandwidth, connectivity etc., which are beyond the control of the FSI/ NIC-CPPP."

BID PROFORMA

S. No.	Description of information		Replies by the bidder
1.	Name of the firm	:	
2.	Complete address of Regd./ Head Office		
	i) Postal	:	
	ii) Telephone/ Fax	:	
	iii) E-mail	:	
3.	Former name of the Firm (in any)	:	
4.	Type of the firm (Proprietary/ Partnership/ Private Ltd. Co. / Public Ltd. Co.)	:	

5.	Whether MSE or Start-Up (tick in the appropriate box)	:	MSE	Start-Up

6.	Year and place established	:	
7.	Are you registered with any Government/ (if yes, give details)for development of web-GIS based applications covered Under the Specifications	:	
8.	Have your company ever been declared Bankrupt (if yes, give details)	:	
9.	Validity period of tender, reckoned from the last date of online bid submission	:	120 days
10.	Whether all technical particulars, drawings etc., furnished and filled in all schedules, appended to the tender documents.	:	
11.	Rate of Taxes & Duties	:	(Mention here only % rates as applicable)
	1. Supply:		
	a) GST	:	(%)
	b) Any other Tax, if any	:	
	2. Transportation & Insurance Charges:		(%)
	a) GST	:	(%)
	b) Any other taxes & duties etc.	:	
12.	Goods & Services Tax Identification No. (GSTIN) (%)	:	

Place:_____

Date:_____

For & on behalf of

Signature   :_____

Name:_____

Designation :_____

(of the authorized representative of the bidder)
Official seal of the Company:

<div align="right">

Annexure- II

(To be filled and uploaded online)

</div>

ELECTRONIC CLEARING SERVICE (ECS) – Form

ELECTRONIC CLEARING SERVICE (CREDIT CLEARING)

(PAYMENT TO PARTIES THROUGH CLEARING MECHANISM)

<div align="right">

No.:

</div>

1.	Bidder's Name	: _____
	a) Address	: _____
	b) Phone/ Mobile No.	: _____
2.	Particulars of Bank Account	_____
	a) Bank Name	: _____
	b) Branch Name	: _____
	c) Address	: _____
	Telephone No.	: _____
	d) IFSC Code of the Bank (for payment through RTGS)	: _____
	e) Account Type (S.B. Account/ Current Account or/ Cash Credit with code 10/11/13)	: _____
	f) Account Number (as appearing on the Cheque Book)	:

I hereby declare that the particulars given above are correct and complete. If the transaction is delayed or not effected at all for reasons of incomplete or incorrect information, I would not hold the user company responsible.

(------------------------------------)

Date: Signature of the Bidder

Certificate that the particulars furnished above are correct as per our records. (Bank's Stamp)

(------------------------------------)

Date: Signature for & on behalf the bank
With Name & Bank Stamp

Declaration regarding applicability of Micro, Small & Medium Enterprise under MSMED Act, 2006

DECLARATION / UNDERTAKING:

A)   I/We confirm that the provisions of Micro, Small & Medium Enterprise are applicable/not applicable to us and our organization falls under the definition of:

      a. [   ]- Micro Enterprise
      b. [   ]- Small Enterprise
      c. [   ]- Medium Enterprise

    Please tick in the appropriate option box [   ] and attach documents/certificate, if any.

B) I/We also confirm that we are MSEs owned by SC/ST Entrepreneurs **(**Strike out if not applicable**)**

C) I/We also undertake to inform the change in this status as aforesaid during the currency of the contract, if any.

(Authorized Representative of Firm)

Declaration Regarding Applicability of Start Ups under Start-Up India Initiative

DECLARATION / UNDERTAKING

A) I/We confirm that the provisions of Start-Up India Initiatives are:

[   ] Applicable to us and our organization falls under the definition of Start-Ups.

[   ] Not applicable to us and our organization does not fall under the definition of Start-Ups.

Please (tick) the appropriate box [   ] and attach documents / certificates, if any.

B) I/We also undertake to inform the change in this status as aforesaid during the currency of the contract, if any.

(Authorized Representative of Firm)

DECLARATION

1.   I,………………………………………………………...............................Son/Daughter/
Wife of
Shri……………………………………………………………………………………………
………………… , Proprietor/Director/authorized signatory of the Agency mentioned
above, is competent to sign this declaration and execute this tender document.

2.   I, have carefully read and understood all the terms and conditions of the tender and
undertake to abide by them;

3.   The information/documents furnished along with the above application are true and
authentic to the best of my knowledge and belief. I/we, am/ are well aware of the fact that
furnishing of any false information/fabricated document would lead to rejection of my
tender at any stage besides liabilities towards prosecution under appropriate law.

4.   Certified that the agency has not been black listed /security deposit has not been forfeited
in case of the agency during the last five years.

                                                        Signature of authorized person

Date:

                                                          Full Name:
                                                          Place:
                                                          Seal

SECTION – III

TERMS AND CONDITIONS OF CONTRACT
(T&C)

Section–III: Terms and Conditions of Contract (T&C)

1.0 Scope of Work: "Upgradation of existing Web-GIS Based Decision Support System Application and its Maintenance".

2.0 Prices, Taxes & Duties:

2.1 Prices shall be Firm and on F.O. R destination basis i.e.FSI, Dehradun inclusive of charges for packing, handling, forwarding, transportation, insurance and all applicable taxes and duties.

2.2 Taxes, duties and levies, as applicable twenty-eight (28) days prior to deadline for submission of bids, shall be mentioned separately in Price Bid i.e. Schedule of Quantities & Prices (Section-III).

2.3 All taxes & duties mentioned in the Price Bid as per clause 2.2 above shall be paid/ reimbursed against proper invoice as per rules/documentary evidence and restricted to the total amount of Taxes and Duties in Price Bid subject to clause 2.4 below. No other taxes and duties shall be payable / reimbursable by FSI.

2.4 Statutory variation, in Taxes and Duties or levy of any new Tax after 28 (Twenty-Eight) days prior to deadline for submission of bid will be adjusted/reimbursed against production of documentary evidence.

3.0 Transit Insurance:

Not Applicable.

4.0 Terms of Payment:
Item 1
  I. 50% of the payment towards **Item 1** (as enlisted in Section IV) may be released on request of vendor on successful upgradation (Application development, upgradation of existing features, customization, deployment and updation as per requirement) of the existing DSS application
  II. The remaining payment towards **Item 1** shall be released after successful testing (Support and Stabilization) of the upgraded DSS Application and upon production of the following documents:

Detail of Documents:
  1. Invoice in Triplicate
  2. Inspection Report, Test Certificates

3. Insurance Intimation/ Cover (if any)
4. All necessary manuals/ keys.
5. Application Source Code.
6. Functional Design Document FDD (Combination of SRS, Application Design, Database Design)
7. New Web GIS along with user management module.
8. User Manual/ Help file
9. Administrator Manual
10. Training and Handholding manuals

Item 2

Payment towards Item 2 (as enlisted in Section IV) will be made in three annual instalments subject to satisfactory performance during the AMC period.

In case of MSE:

All the payments for the supplies and/ or services *[as applicable]* rendered by MSEs (Micro & Small Enterprises) Vendor/ Contractor under the Contract shall be released within forty-five (45) days from the day of acceptance*.

In case, payment is not released as mentioned above, FSI shall pay the principal amount plus compound interest with monthly rests from the date of immediately following the date agreed upon @ three times of bank rates as notified by Reserve Bank of India from time to time.

All the payments for the services rendered by non-MSEs (non-Micro & Small Enterprises) Vendor/ Contractor under the Contract shall be released within forty-five (45) days from the receipt of invoice/ bills from the Contractor/ Vendor complete in all respect. In case, payment is not released as mentioned above, FSI shall pay the principal amount plus simple interest from the date immediately following the date agreed upon @ 8% (eight percent) per annum.

5.0 Delivery Period:

The delivery schedule of from the date of issue of the Letter of Award of the contract are stated as below:

| (i) | Upgradation of existing Web-GIS based Decision Support System (DSS) Application for Forest Clearance and its Maintenance for Three Years including development, upgradation of existing features, customization, and updation as per requirement, configuring the application on NIC cloud and deployment/testing of the application. This also includes the database management in raster and vector formats. (The cost for hosting the application | Within five months of the award of the contract |

	on NIC cloud will be borne by FSI.)	

(ii)	**POST LAUNCH SUPPORT**:: Post launch, for at least 6 months, one dedicated resource person should be stationed in FSI, Dehradun for stabilization and testing of the application.	6 months
(iii)	**ANNUAL MAINTAINENCE CONTRACT**: • After the expiry of the 6 months support period, AMC of three years will be provided with support for the application having issues for application crashes, identifying and resolving bugs or any other issues resulting in non-functioning of the application. • It will also include any additional customization/ change in logic or rules in the application as per emerging requirement during the AMC period. • AMC also will include **Annual Security Audits** of the application to be conducted by the vendor from **CERT-in** empanelled agencies. • AMC will include Data Mirroring of the entire database on the backup server. This will be done on a fortnightly basis.	3 years

6.0 Liquidated Damages:

If the Vendor fails to attain the above objectives of the application upgradation/its launching or any part thereof within the prescribed time for completion under clause 5.0 or any extension thereof (due to delays not attributable to the Vendor), the Vendor shall pay to the Purchaser liquidated damages equal to the amount computed @ 1/2 (half) percent per week or part thereof of Contract Price. The aggregate amount of such Liquidated damages shall in no case exceed 5% of the Contract Price. However, cost compensation for any time extension shall not be paid.

7.0 Performance Guarantee:

Within 28 days of receipt of Work Order, the Vendor shall furnish to the Director General, FSI a Performance Guarantee in the form of Demand Draft/ Bank Guarantee from an Indian Nationalized Bank or any Scheduled Bank in India as per the format appended as **Annexure-A** herewith for an amount equal to (10) ten percent of the contract price by way of guarantee valid till three months beyond the warrantee period as mentioned in the Tender Document for the due and

faithful performance of the contract along with the other terms and conditions agreed to.

The Performance Guarantee shall be released after successful completion of the warrantee period. The Performance Guarantee amount will not earn any interest for whatsoever period detained by FSI. Contractor shall communicate the following bank details to the issuing Bank for online confirmation of Bank Guarantee to be submitted in terms of this clause:

Name of the beneficiary:_____

Account No.: _____

IFSC Code: _____

Address of the Bank: _____

8.0 General:

The Purchaser reserves to itself the right to take over the part or full contract from the Vendor after the award of the Contract or during the execution of Contract without assigning any reason.

9.0 Officer-In-Charge:

Director General, Forest Survey of India shall be Officer-In-Charge of the aforesaid contract.

10.0 Consignee:

Director General, Forest Survey of India, Kaulagarh Road, P.O- IPE, Dehradun – 248195. Contact No:+91-135-2712407 Fax No: +91-135-2756139, Email: dgfsi@fsi.nic.in

11.0 Paying Authority:

Assistant Director (Accounts), Forest Survey of India, Kaulagarh Road, P.O IPE, Dehradun – 248195.

12.0 Court of Competent Jurisdiction:

Any action taken or proceedings initiated on any of the terms of this Agreement shall be only in the court of competent jurisdiction under the Local Competent Court of Dehradun.

13.0 Technical Specifications:

S.NO.	DESCRIPTION	Parameters	Points
1.0	**Company Profile**		
1.1	The firm should have executed at least 1 reputed Web GIS solutions for State Govt. **or** Central Govt. /Govt. aided Institutes/ Organizations in last seven years with minimum value of **50 Lakh** each. (Documentary evidence as in Work Order/ Work Certificate/Proof of Completion of Works, etc. to be provided)	1-2	3
		3-6	6
		>6	10
1.2	**Team Composition** (The vendor should have a team of experts working in different domains with capabilities to develop the application and deliver to FSI with graduate / postgraduate qualification and minimum experience of 2 years.)	Up to 5	5
		>5	10
1.3	The firm should have executed at least one natural resource (forestry, agriculture, horticulture, ecology & environment) monitoring or assessment software application of minimum value of 15 Lakh on a single order for State Govt. **or** Central Govt. /Govt. aided Institutes/ Organizations in last five years. Documentary evidence as in work order or completion certificate need to be attached.	1-3	6
		>3	10
	TOTAL(1) (Maximum Marks)	**30 marks**	
2.0	**Implementation plan of Upgradation and Maintenance of DSS Application, :**		
2.1	Qualitative Evaluation of Technical Features, GUI, Application, Scalability,etc.	30	
2.2	Hosting on Cloud	10	
2.3	Security Features	10	
2.4	Services offered during AMC	10	
2.5	Training and Hand Holding Offered by the Firm	10	
	TOTAL (2) (Maximum Marks)	**70**	
	TOTAL (1 + 2)	**100**	

****

BANK PERFORMANCE GUARANTEE

Bank Guarantee

(To be stamped in accordance with Stamp Act if any, of the Country of the issuing Bank)

Bank Guarantee No. .... Date ....

To,
[Purchaser"s Name & Address]

Dear Sirs,

In consideration of the ....*[Purchaser's Name]* ....
(hereinafter referred to as the Purchaser which expression shall unless repugnant to the context or meaning thereof, include its successors, administrators and assigns) having awarded to M/s ....*[Vendor's Name]* ....with its Registered/Head Office at... (hereinafter referred to as the _Vendor ', which expression shall unless repugnant to the context or meaning thereof, include its successors administrators, executors and assigns), a Contract by issue of Purchaser 's Letter of Acceptance No. .... dated .... and the same having been acknowledged by the Vendor, for ....[Contract sum in figures and words] for ....*[Name of the Work]* and the Vendor having agreed to provide a Contract Performance Guarantee for the faithful performance of the entire Contract equivalent to ......(*) .... of the said value of the aforesaid work under the Contract to the Purchaser.

We.......................... *[Name & Address of the Bank]* ... . having its Head Office at .... (hereinafter referred to as the Bank, which expression shall, unless repugnant to the context of meaning thereof, include its successors, administrators, executors and assigns) do hereby guarantee and undertake to pay the Purchaser, on

demand any and all monies payable by the Vendor to the extent of .... (*)
.... as aforesaid at any time upto .... (@)
.... *[days/month/year]* without any demur, reservation, contest, recourse or protest and/or without any reference to the Vendor. Any such demand made by the Purchaser on the Bank shall be conclusive and binding notwithstanding any difference between the Purchaser and the Vendor or any dispute pending before any Court, Tribunal, Arbitrator or any other authority. The Bank undertakes not to revoke this guarantee during its currency without previous consent of the Purchaser and further agrees that the guarantees herein contained shall continue to be enforceable till the Purchaser discharges this guarantee or till ....*[days/month/year]* whichever is earlier.

The Purchaser shall have the fullest liberty, without affecting in any way the liability of the Bank under this guarantee, from time to time to extend the time for performance of the Contract by the Vendor. The Purchaser shall have the fullest liberty, without affecting this guarantee, to postpone from time to time the exercise of any powers vested in them or of any right which they might have against the Vendor, and to exercise the same at any time in any manner, and either to enforce or to forbear to enforce any covenants, contained or implied, in the Contract between the Purchaser and the Vendor or any other course or remedy or security available to the Purchaser. The Bank shall not be released of its obligations under these presents by any exercise by the Purchaser of its liberty with reference to the matters aforesaid or any of them or by reason of any other act or forbearance or other acts of omission or commission on the part of the Purchaser or any other indulgence shown by the Purchaser or by any other matter or thing whatsoever which under law would, but for this provision have the effect of relieving the Bank.

The Bank declares that this Bank Guarantees issued by the Bank, utilizing the credit limit of M/S………………. (Name of contractor) and also agrees that the Purchaser at its option shall be entitled to enforce this Guarantee against the Bank as a principal debtor, in
the first instance without proceeding against the Vendor and notwithstanding any security or other guarantee the Purchaser may have in relation to the Vendor's liabilities.
i) Our liability under this Bank Guarantee shall not exceed
ii) This Bank Guarantee shall be valid up to
iii) We are liable to pay the guaranteed amount or any part thereof under this Bank Guarantee only and only if Purchaser serve upon Bank a written claim or demand
on or before .... @............
Dated this .... day of....................20...   _
at…………………………….

WITNESS   **Signed for and on behalf of the Bank**

1
      (Signature)   (Signature)
      (Name)   (Name)
      (Official Address)   (Designation with Bank Stamp)
2. ....
      (Signature)   Attorney   as   per   Power
                                                     of Attorney No. ....
                                                     Dated...
      (Name)
      (Official Address)

  Communication address of the Bank
  Name of the contact person

  Tel. No. Fax No.

  Email:

Notes:

1. (*) This sum shall be ten percent (10%) of the Contract Price denominated in the types and proportions of currencies. (@) This date will be Ninety (90) days beyond the warrantee period as specified in the Contract.
2. The stamp papers of appropriate value shall be purchased in the name of guarantee issuing Bank.
3. Vendor 's stamp with full details i.e. name of the Purchaser in whose favour this stamp paper has been purchased should invariably be mentioned on the back side of the stamp paper.
4. Bank Guarantee is required to be submitted directly to the Purchaser by the issuing bank (on Behalf of the Vendor) under the registered post (A.D.). The Vendor can submit an advance copy of Bank Guarantee to the Purchaser. However, in case of exceptional circumstances where efficient postal services are not in force, The Bank Guarantee may be submitted by the Vendor directly to the Purchaser and the issuing Bank shall submit an unstamped duplicate copy of Bank Guarantee directly under the registered post (A.D.) to the Purchaser, with a forwarding letter.

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SECTION – IV

SCHEDULE OF QUANTITIES & PRICES

SECTION-IV: Schedule of Quantities & Prices

Tender Inviting Authority: Director General, Forest Survey of India, Kaulagarh Road, P.O IPE, Dehradun – 248195

Description: Upgradation of existing Web-GIS based Decision Support System (DSS) Application for Forest Clearance and its Maintenance for Three Years.

Tender Specification No:_____ **Dated:**_____/_____/2019

Name of the Bidder/ Bidding Firm / Company:

_____

_____

PRICE SCHEDULE

S. No.	Item	Total Amount (in Rs.)
(i)	Upgradation of existing Web-GIS based Decision Support System (DSS) Application for Forest Clearance and its Maintenance for Three Years including development, upgradation of existing features, customization, and updation as per requirement, hosting, deployment, testing and Post Launch Support of the application.	
(ii)	AMC for three years	
Total in Figures		
Quoted Rate (Rs) in Words		

Note:
1. All applicable taxes & duties including GST, other levies and charges etc. should be mentioned clearly.

2. It is hereby confirmed that, except as otherwise stipulated in the tender Specification and statutory variations permitted as per the contract, the above unit rates and other charges as mentioned in this schedule, will remain firm till the subject supplies are completed. Further, it is confirmed that no other charges would be payable by FSI, in connection with our execution of the resultant Purchase Order.

3. The "Contract Price" shall means the total price mentioned in col. 5.

PART - II

TECHNICAL SPECIFICATIONS AND DETAILS

Upgradation of Existing Web GIS Decision Support System Application for Forest Clearance for Three Years

1. **Background of the DSS Application:** The Decision Support System application is focused on providing qualitative, quantitative & administrative attributes of forests to facilitate, informed, unbiased and expeditious decisions on management of forest in general and implementation of **Forest Conservation Act (1980)** in particular. For a user specified area of interest, DSS system would provide information on the spatial layers (involved in decision making) present underneath the said area. At the same time, the user would be able to execute predefined queries to get details of the Land Cover which include Protected Areas, Tiger Reserves, Corridors & location. Once the information is shown, the user would be able to take a print of the map with geo-coordinates and suitable title and information as well as would also be able to export the same in .xls format.

2. **Description: Analytics and Processing behind the Existing DSS Portal**

The existing DSS Portal uses the following geospatial layers:

S. No.	Layers	Format	Source
1	**Forest Cover Map (FCM)** (8th Cycle to 15th Cycle)	Raster	Forest Survey of India (FSI)
2	**Forest Type Map (FTM)**	Raster	Forest Survey of India (FSI)
3	**Biological Richness (BR)**	Raster	Indian Institute of Remote Sensing (IIRS)
4	**Landscape Integrity (LI)**	Raster	Forest Survey of India (FSI)
5	**Hydrological Layer** (Rivers and Wetlands having area more than 10 ha)	Vector	Central Water Commission (CWC)
6	**Protected Area (PA)** (623 PAs)	Vector	Wildlife Institute Of India (WII)
7	**Tiger Reserves (TR)** (48 TRs)	Vector	Wildlife Institute Of India (WII)
8	**Tiger Corridors** (62 Tiger Corridors)	Vector	Wildlife Institute Of India (WII)
9	**Last Remnant Forest Type**	Raster	Forest Survey of India (FSI)
10	**Very Dense Forest (VDF)** (having patch size more than 1sq. km)	Raster	Forest Survey of India (FSI)
11	**Forest Administrative Boundaries**(15 States)	Vector	Respective State Forest Department (SFD)

12	Recorded Forest Area (RFA) Boundaries (23 States)	Vector	Respective State Forest Department (SFD)
13	States Boundary	Vector	Survey Of India (SOI)
14	District Boundary	Vector	Survey Of India (SOI)
15	Important Bird Areas	Vector	MoEF& CC, New Delhi

All geospatial layers are currently stored as database and not as services in the current version of DSS. The database is hosted on server in FSI premises. Some of the above listed layers take part in analysis while the other layers are present for visualization purpose only. The portal allows the user to define an area of interest (AOI) in the form of lat/long coordinates, shape file or free hand draw and then analyse the given AOI on the basis of 2 Decision Rules. These two rules are hierarchical in nature i.e., if an area of interest is found to violate Decision Rule 1, it will not be considered to be tested for Decision Rule 2. On the other hand, if it does not violate Decision Rule 1, it is tested for DR-2. Notwithstanding this hierarchical rule, an AOI may also be analysed for both the rules.

☐ **Decision Rule 1** is a logic based rule based on the presence/absence of geospatial layers that fall inside the AOI. These layers are Very Dense Forest more than 1 sq. km, Rare Forest Type, Hydrological layer with 250 m buffer around it, Protected Area & Tiger Reserves with 1 km buffer.

☐ **Decision Rule 2** is a grid based rule that involves the analysis of the AOI grid wise.

i. The basic unit for identification of inviolate areas is a grid of size 1Km x 1Km.
ii. Grids, which cover 50% or more area of the polygon, are considered for analysis.
iii. Grids will be classified as INVIOLATE if average score exceeds 70 (out of 100) based on four parameters i.e. Forest Cover, Forest Type, Biological Richness, & Landscape Integrity (5 km buffer).
iv. The area is considered inviolate if 50% or more of the total no. of grids in that area come out as INVIOLATE If not, then it is categorized as NOT INVIOLATE.

Existing GIS server software specifications for server (Arc GIS Server)

S. No.	Component	Description
1.	ArcGIS Sever 10.2	2 licenses (upgradation to latest Arc GIS server will be required if the vendor chooses to work on proprietary software)
2.	Processor	Intel ® Xeon ® CPU E5 2665 0 @2.40 GHz
3.	RAM	32 GB
4.	System Type	64bit OS, x64 Based Processor
5.	Windows Edition	Windows server 2012 R2 Standard

S. No.	Component	Description
6.	Processor	Intel ® Xeon ® CPU E5 2665 0 @2.40 GHz

3. Scope of the Upgradation of DSS

FSI intends to **add the following values** through upgradation of the existing portal of Web GIS:

- ☐ Use of latest technology and allied programming/customization
- ☐ New Analytical capabilities
- ☐ Accommodate large user base
- ☐ Increasing the processing capabilities
- ☐ Adding new parameters
- ☐ Adding new data layers
- ☐ Upgraded Security features.
- ☐ Hosting on Cloud and Data Mirroring.
- ☐ Allow possibilities of customization/ change in logic or rules in the application as per emerging requirement during the AMC period
- ☐ Annual Maintenance Contract for three years with annual security audits by **CERT-In** empanelled agency.
- ☐ Training and Hand Holding (The training and Hand holding will be conducted in FSI headquarters, Dehradun).

Therefore, task of the Bidder will be to undertake upgradation of existing Web-GIS based Decision Support System (DSS) Application as mentioned above(includes development, upgradation of existing features, customization, and updation as per requirement, hosting and deployment/testing of the application).

Along with the task of upgradation, the vendor(s) will also be responsible for hosting the web application, preferably on a Cloud Server. Additionally, Near Real Time Mirroring and its maintenance for the application will also be a part of the assignment.

The vendor team will also provide **6 months' support period** after the deployment of the said application. After the support period, an Annual Maintenance Contract period of three years will be provided to the purchaser. AMC will include:

- Support for the application having issues for application crashes, identifying and resolving bugs or any other issues resulting in non-functioning or under performance of the application.

- Any additional customization/ change in logic or rules in the application as per emerging requirement during the AMC period.
- AMC also will include **annual Security Audits** of the application to be conducted by the vendor from **CERT-in** empanelled agencies.
- AMC will include Data Mirroring of the entire database and maintenance on the backup server.

Therefore, the total period of association of contract will be 3 years and 11 monthsafter the award of the contract. After the said period, the AMC maybe extended again at mutually agreed terms and conditions.
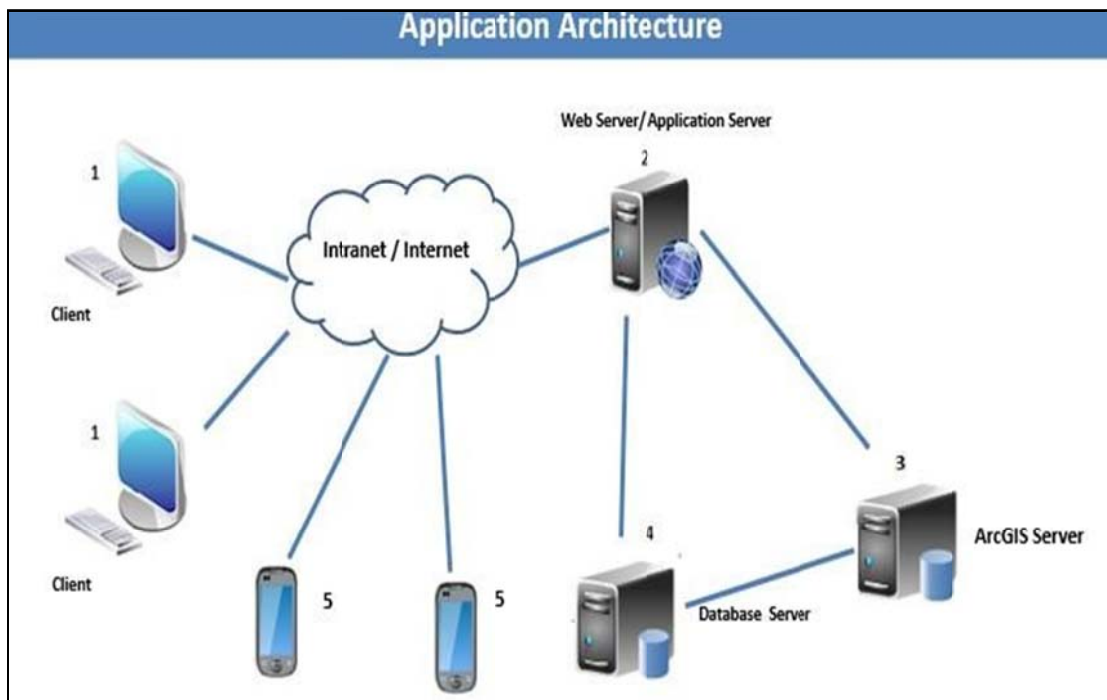

Figure: High level System Architecture for the proposed Application

4. **Technical Requirements**

S. No.	FSI Requirement
1.0	
1.1	☐ The new DSS portal is proposed to be updated using the new technology such as **JavaScript/HTML-5/other** latest technologies to give it an advanced interface. ☐ Application development may be done using open source, proprietary software or a combination of both Open Source and proprietary software which are OGC compliant.

1.2	The application should be capable of realigning and fiting for the smart mobile devices, laptops, tablets etc. The design shall be decomposed to responsive HTMLs which will be compatible with latest versions of browsers and all smart devices.
1.3	Application should work on multiple Geospatial and non-spatial data. Spatial analysis of all the data will be Algorithm/ Rule/Score based in nature. However, all data may not participate in DSS analysis and some may be used for visualization and other analysis purpose alone. The application should be able to use the existing layers in their native format viz: raster and vector and as per requirement and inter-conversion between formats. All layers are subjected to be updated from time to time as per availability of new data from the source agencies like WII, IIRS, State Forest Departments including layers from web services from other agencies. The FCM layer is updated every two years and will be updated on biennial basis by FSI.
1.4	The application is expected to incorporate more number of geospatial layers other than those currently existing which may also participate in DSS analysis.
1.5	The application should be able to generate statistics and reports by way of seamless integration of existing vector and raster layers. This will ensure seamless integration of various spatial and temporal datasets. These reports need to be generated over user defined AOI as well as other vector/raster boundaries available in the database. In the current version, raster data has been converted into vector for analysis. The new version should be able to use the data as it is, raster or vector, in a seamless fashion. The report should include the results of decision rule no 1 & 2 mentioning results associated with all the parameters. Formulae may be changed subject to review. These DSS result reports should be generated in PDF as per predefined template which would include maps, tables, analysis etc.
1.6	The new version should be able to create maps of the participating layers (FCM, FTM, Biodiversity, PA etc.) and also should be able to generate tabulated reports of these layers within the user defined AOI. It should also be capable of generating the output of grid layer. All layers are subjected to be updated from time to time as per availability of new data from the source agencies like WII, IIRS, State Forest Departments including layers from web services from other agencies. The FCM layer is updated every two years and will be updated on biennial basis by FSI.
1.7	Migration of existing data available at FSI in the centralized GIS database along with the necessary data updating. In order to cater for periodic updating of the participating layers (FCM layers updated once in every two years, FTM layer currently under updation, PA layer updated by WII etc.), the new version should be able to include the new layers for analysis. FSI should be able to update a participating layer as and when new version is available.
1.8	There should be a provision of adding and uploading GIS/WMS/WFS layers in the DSS, to analyze the raster and vector data available in the DSS portal.
1.9	Application should be seamlessly accessible for multiple user/agencies keeping more than 5000 users at least. The application should be able to handle traffic of at least 300 users at the same time.
1.10	The application should also have a public page, wherein some data or functions could be made available without the requirement of user authorization. *(It will be decided in due course of time. Some of the functionalities could be made available to public as well with simple registration.)*
1.11	Application should be able to handle large volumes of spatial and non-spatial data seamlessly in its native file format; i.e. Raster, Vector and Standalone tables.

1.12	The grids are pre-determined in the current version. This doesn't give best fit to the polygons which may be of different shapes and the analysis can be misleading. Therefore, in the new version, the grids should be derived on the fly as per the best fit option to cover maximum area within the grid. This process should be consistent and the area within and outside the grids in the polygon should be displayed to the user. (The present portal uses a predefined grid of 1km x 1km overlaid over whole of India. This grid is used for analysis in Decision Rule - II. During analysis most of the grids falling in a polygon are excluded because of being pre-defined)
1.13	Along with the current 1 km X 1 km grids option, there should be an additional option to create grids of size 100m X 100 mor in multiples of this resolution. This will enable analysis of small polygons also. The rest of the analysis would be the same as the 1 km x 1km polygon.
1.14	The present application can process only shape files. The new portal should be able to process kml/.csv/.xls and other file formats including .shp file. Also, in addition to the already available option of manually feeding the coordinates of the area on the portal for generating a polygon on the portal itself
1.15	Until now, only a **polygon feature** can be analyzed in the DSS portal. The application should also enable the processing of **point** and **line** feature along with a buffer of desired distance and area in different units (i.e. m^2, Km^2 and ha).
1.16	Location based search should be possible in the application. The new version should have a Base Map (Good resolution Imagery) in the background of the portal to serve as a geographical reference similar to Google Earth.
1.17	In the near future new layers like **CRZ (Coastal Regulation Zone)**, **Eco Sensitive layer etc.,** maybe uploaded on the New DSS Portal for analysis and visualization. Therefore, a tool for adding on new layers on the application is to be provided. This tool is to be developed in such a way that a buffer can be generated as defined by the user. Simple analysis indicating the distance of the uploaded feature (point, line and polygon) from the selected layer should be provided. The latest Forest Cover data as per ISFR 2017 will replace the existing FCM layer. Since Forest Cover Maps are updated every two years, the provision of updation of this layer should be provided.
1.18	The new portal to enable users to make **georeferenced maps in PDF format** according to the layout provided by FSI. (coordinates: longitude and latitude) four corners of the area to be displayed.)
1.19	The DSS-3 portal is to have a separate tab for both Decision Rule-I and Decision Rule-II as these analysis are hierarchical. These rules must also be executable separately if required.
1.20	Multiple raster data of time series data such s Forest Cover, Forest Type etc, should be uploaded on the DSS portal. These data can be used for time series and other analysis based on particular AoI (user defined/ available in database). For example, Forest Cover data of various successive **India State of Forest Reports** are to be uploaded on the portal for visualization and analysis. Different overlays of available raster/ vector data should be made possible including generation of area statistics, maps etc.
1.21	Options for sharing of data (raster and vector) available on the portal to users through download to be made available. Download request forms and admin authorization page are needed to keep track of data downloads. *(The registered user will have the option to request data (raster, vector data) with in the user defined AOIin commonly used spatial data formats e.g. geotiff,etc.*

	Such request can be approved by the FSI admin after which the data layer can be made available for download to the users through FTP.)
1.22	Whenever the portal is out of order/under maintenance, a provision to be given to the administrator of FSI to flash a message on the portal for information to the users.
1.23	The number of users currently on the application is to be flashed on the web portal. Also number of hits and classification by region to be made available to admin.
1.24	The maintenance and minor improvements in the software of DSS-3 for the duration of three years to be included as a part of the proposal. This includes any change in the decision rules that are Algorithm/ Rule/Score based in nature. Full support is to be provided during this duration.
1.25	The new portal will contain all existing data and functionalities being used in the present portal.
1.26	The application will replace the old one only after it is operational. During the development of the new portal, the DSS-2 will be running as usual. All the tools/ buttons available in the portal are subject to change/modification and should be customizable at the end of FSI.
1.27	In addition, other functionalities available from the Server software and collector software can be useful.
HOSTING	
1.28	The new portal is to be hosted preferably on a cloud server. All the requirements for hosting, smooth functioning and near real time mirroring of data will also be taken care of by the concerned vendor.
1.29	**Near Real Time Mirroring** is strongly recommended for the application wherein the entire data of the application is copied from one location to a storage device in real time. The maintenance and smooth operation of the backup server will also be taken care of by the vendor. Mirroring of the application will be at the FSI server located in our premises Dehradun.
APPLICATION TESTING	
1.30	The vendor is to conduct different types of testing to ensure that the application meets all the requirements. Test types should include unit, integration, functional, system, and performance tests, etc.
POST LAUNCH SUPPORT	
1.31	Post launch for at least 6 months, one dedicated resource person should be stationed in FSI, Dehradun for stabilization and testing of the application.
TRAINING AND HAND-HOLDING	
1.32	Identify the training requirements and train the concerned FSI staff/officers for successful implementation and maintenance of the developed system. The Training shall include application, database and other related features. The vendor shall provide number of trainings as per the requirement.

MAINTAINENCE AND SUPPORT / AMC	
1.33	Maintenance and Technical Support from the date of issue of completion certificate, system with onsite technical support as and when required for a period of 3 years.
1.34	AMC should include minor additional requirements/minor changes apart from regular maintenance.
1.35	Any change of logic in the processing/ decision rules of the DSS shall be duly incorporated by the vendor during the AMC period.
AUDIT/SECURITY ISSUES	
1.36	There are many security loopholes in the existing DSS Application as revealed in the Security Audit of DSS in 2015 carried out by empanelled agency of CERT-In Security audit of the application would be carried out through empanelled agencies by FSI. The vendor dealing with the development/Upgradation of the DSS to Version 3 will have to attend to the vulnerabilities pointed out in the Security Audit of the application before its deployment. After the deployment of the DSS application annual security audit would be carried out by FSI and the selected firms shall attend to the vulnerabilities till expiry of AMC. However if any other vulnerability is pointed out in between the security audits the same shall be resolved by the firm. The cost of conducting the security audit will be borne by FSI
1.37	The vendor of the DSS Version 3 will ensure that the application is free from audit issues during the entire association with the purchaser. Cost for post audit correction to be included in the bid; quarterly continuous security updates.
USER BASE	
1..38	Application should be seamlessly accessible for multiple user/agencies keeping more than 5000 users at least. The application should be able to handle traffic of at least 300 Concurrent users at the same time.

5. **List of Functionalities to be Migrated/ Added in The New Application**

S. No.	Module	Functionalities	Description
1	Admin & UMS	Login	Allows the user to login/access the portal
2	Admin & UMS	Change Password	Allows the user to change his/her password.
3	Admin & UMS	Logout	Allows the user to logout/exit the portal
4	Admin & UMS	New User Registration	Provision for admin to create new users and share the credentials through e-mail to respective users. No end to end work flow is required.
5	Admin & UMS	Modify User Registration	Provision for admin to modify user details and regenerate password in case of a forgotten password

6	Admin & UMS	Delete User	Provision to delete in-active users
7	Admin & UMS	Audit Trail	The audit trail allows the admin to see the user ID of the people who have logged into the application, the time when they logged in as well as when they logged out and the current status of the user.
8	Admin & UMS	User Info / Admin dashboard	The number of users currently on the application will also be flashed on the web portal. Also number of hits and classification by region to be made available to admin.
9	General	Map Viewer with Map Navigation	Allows the user to use the features of Map viewer with Map navigation
10	Admin & UMS	Configurable parameters	This functionality will enable the administrator to configure the parameters of analysis as desired to perform a DSS analysis.
11	Admin & UMS	out of service message	Whenever the portal is out of order/under maintenance, a provision to be given to the administrator of FSI to flash a message on the portal for user's information.
12	Tools	Legend	This widget shows the symbology for all the visible layers in the map display.
13	Tools	Layer List	This widget shows the list of all the layers in the map display with the option to turn off the layers as well. List of layers to be shown to come from a config table
14	Tools	Adding layer	Adding various layers on application as and when required for viewing purpose, user will have option to add any layer temporarily on map for viewing
15	Tools	Identify	This widget displays all the underlying layers on which the user draws appoint/line/polygon.
16	Tools	Draw and Measure	This widget allows the user to draw different geometry line point, line, polygon and then displays coordinates (point), length (line) and perimeter and area covered (polygon).
17	Tools	Print	This widget allows the user to print the displayed map with its current extent as well as save it in a PDF format with coordinate
18	Tools	Coordinate	The Coordinate widget shows the latitude-longitude value of the position where the mouse pointer is currently located.

19	Tools	Scale Bar and Label	This widget displays the scale for the current extent of the map as a label as well as scale bar.
20	Tools	Base Map Service	Various ESRI/ Open Source Base maps
21	AOI Define	Draw AOI	Draw AOI by freehand polygon or draw Vertex
22	AOI Define	Generate AOI	Enter Latitude-Longitude: This button opens a table where the user can enter values of latitude-longitude of the polygon.
23	AOI Define	Load AOI using SHP	The user can load a shape file in a zipped Format.
24	AOI Define	Load AOI using KML	Load a KML file which can be used as an AOI
25	AOI Define	Load AOI using .CSV	Load co-ordinate in CSV format for creating an AOI
26	AOI Define	On point buffer	Draw a point and create a buffer as AOI
27	AOI Define	On line buffer	Draw a line and create a buffer as AOI
28	Buffer Analysis	Proximity Analysis	The user can select a polygon/line/point, to able to do analysis on selected layers for proximity, intersect options, and provide reports of the same. E.g. When the checkbox is checked, another label appears to enter a distance value. The application then draws a buffer around the polygon, and shows if there is a tiger reserve, Tiger corridors within that defined distance during the "Get Land cover" analysis.
29	Buffer Analysis	Get Buffer details	When the "Get buffer details" button is clicked, the application displays the table which shows information like the state, district, tiger reserve, protected area etc. in that polygon or within the defined buffer.
30	Grid creation / Display	Create Grid	Option for creating grids in various sizes 1 km x 1 km, 100 m x 100 m and its multiples for analysis of the selected AOI.

31	Grid creation / Display	Grid Display	When this button is clicked, the application displays all the grids that the inserted polygon touches for the AOI polygon
32	Grid creation / Display	50% Grid rule	Apply 50% rule Checkbox: When this checkbox is clicked, the grids in which the inserted polygon occupies less than 50% of the grid area are discarded.
33	Buffer Analysis	For Hydrology layer	When this button is clicked, the application draws a buffer of 250 meters around the selected polygon and then if the polygon (with or without its buffer) intersects/touches any major waterbody, the area is declared as "Inviolate" and further calculations are discarded. Features. It will include Hydrological Reservoirs, Surface Area, Eco sensitive zone.
34	Search	Area Search	This widget allows the user to zoom into a specific state and district by choosing the required names from the dropdown lists.
35	Search	Location search	Enables the user to search for a desired location and fly to it.
36	Rule base analysis	Decision Rule-I (Layer wise)	Do the individual analysis for Hydrological Layers, Very Dense Forest Patches, Last Remnants of Forest Types, Protected Areas, endangered wildlife species and provide results on screen as well as database
37	Rule base analysis	Decision Rule-I (Batch process)	All process in rule-1 in single click and provide summary report
38	Rule base analysis	Decision Rule-2 (Layer wise)	Process for Forest Cover, Forest Type, Biological Richness and Landscape integrity and provide result
39	Rule base analysis	DecisionRule-2 (Batch Process)	All process in rule-2 in single click and provide summary report
40	Rule base analysis	Wildlife species	When the user draws a polygon and performs the analysis, the application will add a predetermined score to the final score generated depending on the presence of an endangered species. Each species will have a predetermined score thus affecting the final score. For the calculation of score and inviolate area, guidelines given by MoEF&CC for wildlife species will be used.
41	FCM Report	To get FCMdetails of any select AOI/Polygon in a pre-defined format.	Forest Cover Maps of various successive India State of Forest Reports are to be uploaded on the portal for visualization and analysis. The Forest Cover Area Figures for a particular polygon to be saved in PDF format and the FCM for the polygon to also be visible on the portal when it is processed.

42	Reports	Reports of individual process	Reports in tabulated form with respective data
43	Reports	Reports of batch process	Reports in tabulated form with respective data
44	Reports	Final result on a pre-defined template	Final report of processes in a PDF format results in grids, charts along with respective Map snippets.
45	Save & Retrieve	Save AOI	To save respective AOI on database
46	Save & Retrieve	Save Result	Save all results in a database
47	Save & Retrieve	Retrieve AOI and Result	List of all saved AOI and its respective reports
48	Time Series	Time Series Analysis of FCM layer	This button allows the user to compare the changes in the FCM layers under different forest cover class for two or more years of the inserted polygon, for a particular AOI
49	NPV	Net Present Value	This button allows the user to calculate the NPV value of the AOI. The Net Present Value of the polygon is determined based on Eco class and forest cover on which it lies.
50	Export	Export AOI	Allows the user to export the AOI in a desired format (.shp,etc)
51	Public Portal	Public Portal	The application to also have a public page, wherein some data or functions could be made available without the requirement of user authorization.
52	Data Sharing	Work flow for data sharing in raster and vector	The registered users will have option to request data (raster, vector data) with in the user defined AoI through a form. Admin will process such request and data will made available through FTP.
53	Integration	Seamless Linkage with **PARIVESH** portal of **MoEF & CC**	**PARIVESH** portal of **MoEF & CC** offers single-window access to different web based clearance systems. The upgraded DSS-3.0 should also be capable of integration with the same. The integration modalities will be worked out by the firm as per direction of NIC node of MoEF&CC, New Delhi.

6. **List of other Deliverables:**
   - ☐ Functional Design Document FDD (Combination of SRS, Application Design, Database Design)
   - ☐ User management module.
   - ☐ Application Source Code
   - ☐ User Manual/ Help file
   - ☐ Administrator Manual
   - ☐ Training and Handholding.
   - ☐ Software media, if any.

7. **Information Communication and Technology (ICT) standard for the above Upgradation of Web Portal**

   i. Selection of the technologies for the above procurement should be robust, scalable, should fully support technological upgradation.

   ii. The application should be Open Geospatial Consortium (OGC) compliant.

   iii. Application development may be done using open source as well as proprietary software. Technical support for the applications is necessary requirement at least for three years.

   iv. Once the application has been delivered and installed at FSI, concerned officials of FSI should be properly trained and at least for six months hand holding should be ensured for smooth functioning of the new application into the FSI system.

   v. Selection of the above technologies should be done in a manner that the existing infrastructure and functionality of the ongoing activities of FSI are not affected.

   vi. The application should be fully compatible with the existing software in use at FSI and should support all data formats.

   vii. The bidder should clearly describe his methodology; the tools/ software he is proposing to achieve the same.

   viii. The final product in the form of customization/ Application as any software development in the process of execution of the work order under this tender will be the intellectual property of Forest Survey of India, Dehradun.

   ix. Any software procured for developing the application under this tender should be handed over to FSI along with the license/ key.

   x. All such source code developed for the above application or customization should be duly delivered to FSI.